

17. *A. pedicellata* A. Nelson in Proc. Biol. Soc. Wash. **17**: 91 (1904) = *Phoenicaulis cheiranthoides*, var. *lanuginosa* (Watson) Rollins.
 18. *A. runcinata* Watson in Proc. Am. Acad. **17**: 319 (1882) = *Sibara runcinata*, comb. nov. (Not *A. runcinata* Lam., Encycl. **1**: 222 (1783)).
 19. *A. Viereckii* O. E. Schulz in Notizbl. **11**: 389 (1932) = *Sibara Viereckii* (Schulz), comb. nov.
 20. *A. virginica* (L.) Poir. Encycl. Suppl. **1**: 413 (1810) = *Sibara virginica* (L.), comb. nov., based on *Cardamine virginica* L., Sp. Pl. **2**: 656 (1753).
 21. *A. Whitedii* Piper in Bull. Torr. Bot. Club **28**: 39 (1901) = *Hali-molobos Whitedii* (Piper), comb. nov.

STANFORD UNIVERSITY.

VIBURNUM EDULE AND ITS NOMENCLATURE

M. L. FERNALD

VIBURNUM EDULE (Michx.) Raf. in Med. Repos. hex. **2**, v. 354 (1808); Pursh, Fl. Am. Sept. i. 203 (1814), in part only. *V. Opulus*, γ . *edule* Michx. Fl. Bor.-Am. i. 180 (1803). *V. Opulus pauciflorum* Raf. Alsog. Am. 58 (1838). *V. pauciflorum* La Pylaie ex Torr. & Gray, Fl. N. Am. ii. 17 (1841). *V. Opulus*, var. *eradiatum* Oakes in Hovey's Mag. vii. 183 (1841). *V. eradiatum* (Oakes) House in Am. Midl. Nat. vii. 130 (1921).

In its nomenclatural misinterpretations *Viburnum edule* well illustrates the failures to go to original sources which lead to so many errors in the names of our American plants. In § *Opulus* we have three species, two endemic Americans and the introduced Eurasian *V. Opulus*. Briefly their diagnostic characters are as follows.

- Petioles exstipulate at base, glandless at summit or with small glands at base of leaf-tissue; blades shallowly lobed or unlobed; cymes 1.5–3.5 cm. broad, of uniform perfect flowers; stamens much shorter than corolla-lobes; straggling to erect shrub.....*V. edule*.
 Petioles with slender basal stipules, usually with glands well below the leaf-tissue; blades deeply lobed; cymes 0.4–1.5 dm. broad, their marginal flowers neutral and with greatly enlarged flat corollas; stamens of perfect flowers longer than corolla-lobes; upright shrubs or small trees.
 Glands on petioles dome-shaped, columnar or clavate, with rounded summits; stipules filiform-clavate or with thickened tips.....*V. trilobum*.
 Glands on petioles forming depressed concave-topped disks; stipules filiform-attenuate, with slender tips.....*V. Opulus*.

Viburnum trilobum Marsh. is the American species which is often merged with the Eurasian *V. Opulus*. Michaux, Fl. Bor.-Am. i. 180 (1803) divided *V. Opulus* into three varieties:

Var. α . *europeanum*.

β . *Pimina*: foliis tricuspидatis; lobis sursum angustatis promissis acuminatis.

γ . *edule*: pumilum, strictum, multicaule foliis brevissime lobatis, denticulato-serratis, denticulis acuminatis; fructibus edulibus.

Hab. in Canada.

V. Opulus, β . *Pimina* (from colloquial name in Canada) is, of course, *V. trilobum*, γ . *edule*, not only by the clear description but by the specimen of it preserved in the Michaux herbarium at Paris, which I examined first in 1903, which is characteristic *V. pauciflorum* La Pylaie. This, as above indicated, was properly, but quite unintelligently, published by Rafinesque in 1808 as *V. edule*, lack of understanding where nomenclatural transfers and realignments are concerned often being glorified over clear understanding of the characters of the plants! Rafinesque (1808), forecasting a work never published, enumerated scores of *nomina nuda* but by associating some of his binomials with properly described plants of others he got by. In a group of new binomials based upon American plants of Michaux and including *Potamogeton epihydrus*, *P. foliosus* and others which are regularly taken up, Rafinesque had "Viburnum edulum [error for *edule*], *V. opulus* var. of *Mich.*" Rafinesque, by giving no description, merely rested his *V. edule* upon *V. Opulus*, var. *edule* Michx., which is *V. pauciflorum* La Pylaie ex Torr. & Gray (1841). Pursh, however, with as little understanding of the actual Michaux material as Rafinesque, boggled things, for he added to his description of *V. edule* (1814) the glandular petioles and neutral marginal flowers of *V. Opulus* and *V. trilobum* ("petiolis glandulosis, cymis radiatis"), although citing Michaux's variety as the source of the name. It thus followed, that, taking their conception of *V. edule*, not from the Michaux material, but from Pursh's misrepresentation of it, the name *V. edule* Raf. (not Pursh) has been regularly assigned to the synonymy either of *V. Opulus* or its American representative, *V. trilobum*.

Later, in 1838, Rafinesque got hold of material from Labrador of the small shrub, without stipules and petiolar glands (the only member of the section growing in Labrador) and gave a lucid account of it as *V. Opulus pauciflorum*, this trinomial being erroneously rendered in Index Kewensis as a binomial *V. "pauciflorum*

Rafin. Alsog. Am. 58"; and, most unfortunately, Rafinesque's trinomial has been accepted as a binomial by Robinson & Fernald and some others, instead of the properly published binomial *V. pauciflorum* La Pylaie ex Torr. & Gray (1841) or, as above shown, *V. edule* Raf. (1808).

House, making the combination *V. eradiatum* (Oakes) House (1921), supposed that there was a *V. pauciflorum* Raf. (1838), House's *V. eradiatum* being "*Viburnum pauciflorum* Pylaie; Torr. & Gray, Fl. N. Am. (2): 17. 1841. Not Raf. Alsog. Am. 58. 1838". Had House carefully compared the description in Torrey & Gray with that of Rafinesque (1838) he would have found that they both emphasized the most important characters: lack of stipules and usually of petiolar glands, slight lobing of blade, small cymes on lateral shoots, etc. Here is Rafinesque's account of 1838, from which it is clear that he did not know his own *V. edule* of 1808 but interpreted the latter from Pursh's inaccurate later description:

251. *Vib. Op. pauciflorum* Raf. ramulis teretis verrucosis, petiolis nudis sine gland. vel stipulis, fol. latovatis non trilobis, basi rotundatis vel subcord. serratis glabris; cymis pedunc. paucifl. vel trifloris, fruct. rubris subrot. compressis—apparently different from *V. edule* [as defined by Pursh] with glandular petiols and trilobe leaves. From Labrador, stem thick rubicund, with small white warts, many bifoliate lateral shoots.

Torrey & Gray's account of the La Pylaie plant (from Newfoundland) is so readily available that I merely quote phrases: "leaves . . . slightly 3-lobed or incised at summit . . .; petioles destitute of stipuliform appendages; cymes (small and simple) pedunculate, terminating the short lateral branches." That this account, in 1841, of the Squashberry of Newfoundland was based on specimens similar to those which Rafinesque described in 1838 is apparent. Unfortunately, the long-established name *V. pauciflorum*, accompanied in both cases by a clear diagnosis, has to give way to the technically correct, though by its author not understood name *V. edule* Raf. (1808).